

# Pasquotank County Agricultural Development Plan

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## Acknowledgements

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This plan was written by W. Stan Dixon and Ed Emory. Dr. Dixon has an Ed.D. from N.C. State University and served with N.C. Cooperative Extension in Martin, Wake and Greene counties. He retired in 2009 from N.C. Cooperative Extension as County Extension Director. Mr. Emory holds a B.S. and M.Ed. from N.C. State University and served with the N.C. Cooperative Extension Service in Pamlico and Duplin Counties for more than 28 years. He retired in 2009 after serving 19 years as County Extension Director in Duplin County.

The following agencies and individuals assisted with the development of this plan:

- North Carolina Cooperative Extension, Pasquotank County Center
- Pasquotank County Board of Commissioners
- Pasquotank County Manager
- North Carolina Forest Service
- Elizabeth City-Pasquotank County Economic Development
- Lois G. Britt Agribusiness Center, University of Mount Olive
- The citizens, farmers and agribusinesses of Pasquotank County





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## Executive Summary

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Pasquotank County has a viable agricultural sector that is an important part of the total county fabric of life. The goal of this Agricultural Development Plan is to reflect the importance of agriculture and assess the opportunities, challenges and issues that are currently facing the industry. This plan provides recommendations, based on citizen input on ways to enhance agriculture, forestry, agribusiness and agritourism.

Farmland is an irreplaceable natural resource, and the farmers who are stewards of the resource impact the economy and quality of life for all county residents. The economic impact of the agriculture sector in 2012 was 7.9 percent of the county's value added total income. The agriculture sector also accounts for 7.1 percent of Pasquotank County's total employment<sup>1</sup>. Pasquotank County has the resources, natural and human to ensure that agriculture can prosper in the future. The impact of agriculture in Pasquotank County in 2012:

- Agriculture and agribusiness contributed \$109,881,023 in total income
- Pasquotank ranked 7<sup>th</sup> in the state in wheat production
- Pasquotank ranked 9<sup>th</sup> in the state in vegetables and fruit production
- In total cash receipts from agriculture, Pasquotank County ranked 50<sup>th</sup> in the state<sup>2</sup>

County farmers surveyed, 43 percent, lacked sufficient land to expand or diversify their operations. Pasquotank County farmers reported facing other critical issues, low commodity prices, rising production input cost and development pressure. The farmers are confronted by other challenges to their operations, such as aging farmer population, with the average age of farmers being 58.8 years old and 100 percent not having farm transition plans. These issues present opportunities to enhance agriculture through education and support of citizens and local government.

Of the non-farm citizens surveyed, 100 percent believe that local government should take action to preserve farmland as a valuable resource. Eighty-six percent of non-farm citizens believe that farming enhances the scenic beauty and open spaces of the county while providing a positive impact on the environment. All of non-farm respondents support farm and forest preservation efforts in the county.

At the center of the Pasquotank County Farm Preservation Plan based on information provided by farmers, agribusiness leaders and non-farm residents through personal interviews and surveys are proposed recommendations. The recommendations and action steps were developed to provide a guide for protecting and enhancing agriculture in Pasquotank County. The success of this plan depends on the collaboration between local government, agricultural organizations, farmers, agribusiness and citizens of Pasquotank County. The plan needs to be evaluated annually to celebrate accomplishments and add new recommendations as needed. The recommendations are:

- 1. Support measures to protect and promote forest and farmland in Pasquotank County.**
- 2. Promote and Increase Enrollment in Voluntary Agricultural District (VAD) and Create and Adopt Enhanced Voluntary Agricultural District (EVAD) Programs.**
- 3. Develop and conduct programs to assist Pasquotank County farm and forest landowners with farm transition planning.**
- 4. Promote appreciation and awareness of the benefits of agriculture to Pasquotank elected officials and citizens.**
- 5. Expand and Support Youth Agricultural Educational Programs.**
- 6. Develop Technical, Business and Marketing Training for the Maintenance and Expansion of Agriculture in Pasquotank County.**

The intent of this plan is neither to limit nor restrict landowners' rights and uses. The plan is intended to serve as a guide for actions to provide farmers, landowners and citizens an increased awareness of farmland preservation opportunities. Agriculture is important to Pasquotank County and its economy and to the well-being of family farms. However, the final decision on farmland preservation rests in the hands of the owners of farm and forests.

## A Need for Action

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Agriculture, consisting of food, fiber and forestry, is North Carolina's leading industry. In a 2015 report by Mike Walden, professor and extension economist at North Carolina State University, more than 16% of the state's workforce was directly involved with agriculture, and industry that contributes \$83.7 billion, or 17%, to the gross state product in North Carolina<sup>3</sup>. In Pasquotank County, agriculture accounted for 7.6 percent of Pasquotank County's employment in 2012. According to Mike Walden in 2012, agriculture and agribusiness added \$49,522,814.00 or 8.4 percent of the county's value added total income<sup>4</sup>.

Pasquotank County's leadership is cognizant of the importance of agriculture to the local economy and is supportive of an Agriculture Development Plan that addresses issues related to farm and agribusiness viability for the future. The goal of the Pasquotank County Agricultural Development Plan is to provide strategic actions that will guide local leaders in their efforts to preserve farms and forests, as well as market the many benefits of the agricultural industry.



## Overview of Pasquotank County

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Established in 1668, Pasquotank County is located in the northeastern portion of North Carolina. It was originally part of Albemarle County that consisted of present day Currituck, Chowan and Perquimans counties. Derived from the Algonquin term *Pasketanki*, which means ‘where the current of the stream divides or forks,’ Pasquotank County is home to the Chowan, Perquimans, Little River and Pasquotank rivers. The source of all these rivers is the Great Dismal Swamp. Pasquotank County’s southern border is the Albemarle Sound. The county is extremely accessible by water<sup>5</sup>.

The county seat of Elizabeth City was incorporated in 1793. In the early 1800’s, due to the port and the construction of the Great Dismal Swamp Canal, Elizabeth City and Pasquotank County became an important shipping and trade hub for Northeastern North Carolina. According to local lore, there has been a port in Elizabeth City that has been in operation since 1722. The first written record of the port was in 1757. The port was important for the development of the North Carolina colony by shipping out local forest and agricultural commodities such as pitch and turpentine, beef, pork, rice, flour and lumber. In 1793, the Great Dismal Swamp Canal linked the fertile isolated land of Pasquotank County to the important port at Norfolk, Virginia. As early as 1817, a steam boat line operated between the port of Elizabeth City and New Bern, North Carolina<sup>6</sup>.

Just prior to the Civil War, Pasquotank County was home to a bustling ship building business, with shipyards located up and down the port of Elizabeth City<sup>7</sup>.

Even today, as roadways provide the major transportation links for Pasquotank County, its rivers are still much of the county’s focus. The 1996 Pasquotank County Land Use Plan Update recognizes the importance of water to the county. Almost the entire southern half of the county is described as being along estuarine shorelines. These estuarine waters are fed by rivers whose headwaters are in the wetlands of the Great Dismal Swamp, which marks the northern end of Pasquotank County. As the county Land Plan Use notes, these wetlands,

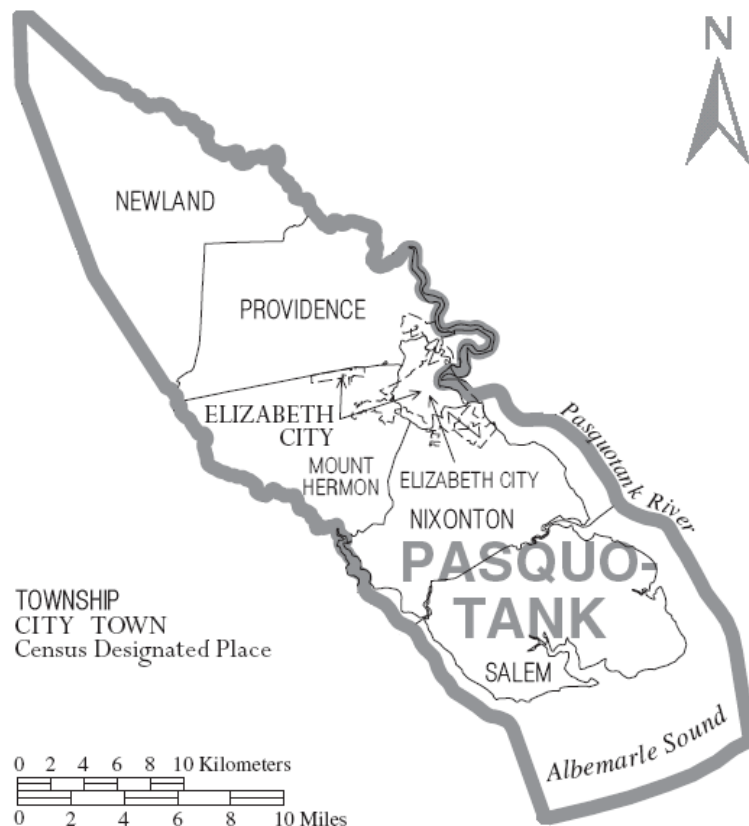
“are habitat for important marine and wildlife species. Many of the recreational and commercially important fish and shellfish species spend a portion of their life cycle in the tributaries of the Little and Pasquotank Rivers. . . . The harvesting of these fish and shellfish add to the local economies of the Albemarle region.”

In fact, the land use of Pasquotank County depends on these rivers and wetlands. Of a total 185,078 acres in the county, the largest portion, 87,862 acres or 47%, is in crop and pasture land. The next largest portion of the county is taken up by water, some 41,005 acres or 22%. Beyond that, another 20,980 acres or 11% of the county is in wetland areas such as bottomlands, swamps, marshes, and pocosins. Without this one-third of the county to drain the excess water, half of the county that is in agricultural use would be in constant threat of flooding and disuse<sup>8</sup>.

According to the 2016 US Census estimates, Pasquotank County has a population of 39,864 citizens. This figure represents a 2 percent decline in population from 2010. The county is 58.6 percent white, 36.8 percent African American, and 5.1 percent Hispanic<sup>9</sup>.

As previously stated Elizabeth City is the county seat and is the only incorporated town in the county. Other communities include Nixonton and Weeksville.

Pasquotank County is divided into five townships of Newland, Mt Hermon, Providence, Nixonton, and Salem.



Map 1: Pasquotank County Townships. Source: Pasquotank County Planning

Pasquotank County is identified as a micropolitan statistical area by the US Census Bureau. This area consists of the three counties of the inner banks of Camden, Pasquotank and Perquimans and is anchored by Elizabeth City<sup>10</sup>.

### ***Economy***

The North Carolina Department of Commerce ranks each of the state's 100 counties into three tiers based on the economic well-being of each county. Tier 1 is the most distressed and Tier 3 is least distressed. Pasquotank County is designated as a Tier 1 county. In 2014, the county's ranking fell to the most distressed after being designated a Tier 2 county since 2007<sup>11</sup>.

In 2016, the median household income in Pasquotank County is \$45,750.00 compared to the state figure of \$46,868.00. Seventeen percent of Pasquotank's population is considered below the poverty level, slightly higher than the state's at 16 percent<sup>12</sup>.

Sixteen percent or 2,836 working Pasquotank County residents work outside North Carolina. Fourteen percent or 2,367 residents work within North Carolina but outside Pasquotank County. Seventy percent or 12,053 work within the county. The unemployment rate in Pasquotank County is 6.3 percent, which is higher than the North Carolina rate of 4.2 percent<sup>13</sup>.

Agriculture and agribusiness provided jobs for 7.1 percent of Pasquotank County's working residents according to a study completed by Dr. Mike Walden in 2015<sup>14</sup>.

### ***United States Coast Guard Base***

One of the United States Coast Guard's busiest bases, Support Center Elizabeth City is home to five commands: Air Station Elizabeth City, Support Center, Aircraft Logistics Center, Aviation Technical Training Center and a small-boat station. The base is the Coast Guard's largest aviation facility and it is the largest employer in Northeastern North Carolina.

Elizabeth City residents have a great amount of respect for the men and women who represent the "Guardians of the Coast" and the important work they conduct to keep United States' shorelines safe. On May 29, 2015, the special relationship between the base and community became official when U.S. Coast Guard Commandant Paul Zukunft designated Elizabeth City a "Coast Guard City," an acclaimed distinction given to only 16 other cities in the United States that have demonstrated special efforts to acknowledge the professional work of the Coast Guard men and women assigned to the area.

The base covers 900 acres of Pasquotank County. The base employs 855 military personnel, 615 civilian personnel and 650 contract employees. The total economic impact of the base is \$117,000,000<sup>15</sup>.

### ***Cost of Services***

American Farmland Trust conducted 151 cost-of-community-services studies, including six in North Carolina, to determine the contributions made to the economy by land uses. The studies focus on three main land uses: commercial and industrial, working and open land, and residential. Agricultural and commercial land uses require few public services than residential land uses,

saving money for the county. For each \$1 of revenue received from each land use, the cost of community services study concluded that:

- Residential land cost \$1.16 in public services.
- Working and open lands (including agriculture and forestry) require \$0.35 for public services.
- Commercial and industrial land cost \$0.29 for public services.

While similar impacts would be expected in Pasquotank County, a study of this nature can help local leaders and developers understand the impact and importance of planned land-use development on the county's economy<sup>16</sup>.

### ***Infrastructure and Transportation***

Pasquotank County is connected to the region by US 17, US Business 17, US 158 and NC 344. These highways provide Pasquotank County with access to Interstate 70, Norfolk, Virginia, the Outer Banks, and Albemarle Sound.

Pasquotank County is also served by rail from the Chesapeake and Albemarle Railroad. Elizabeth City has regional, joint civil-military airport, shared with the US Coast Guard Air Station Elizabeth City. Scheduled domestic and international passenger services are available at the Norfolk International Airport about an hour north in Norfolk, Virginia.

### ***Health***

The Sentara Albemarle Medical Center is the region's major medical facility and Albemarle Regional Health Services, which provide health services, including medical care and testing are located in Elizabeth City.

### ***Water***

The county operates three water treatment facilities – Pasquotank County, Pasquotank County Reverse Osmosis, and South Mills which provide drinking water to Pasquotank County. The Pasquotank County, Pasquotank County Reverse Osmosis, and South Mills facilities are permitted for 2.4, 2.0, and 0.86 million gallons per day, respectively. The Elizabeth City Water Treatment Plant is permitted for 5.0 million gallons per day. Municipal wastewater is treated at the Pasquotank County, Pasquotank County Reverse Osmosis, South Mills, and Elizabeth City Wastewater Treatment Plants<sup>17</sup>.

### ***Power***

There are three solar power plants located within Pasquotank County along US 17 (two plants) and US 158 (one plant). These three power plants have a net summer capacity of 20 megawatts (mw) each (60 mw total)<sup>18</sup>.

### ***Recreation Activities***

Recreational boating is one of the largest tourism activities in Pasquotank and other counties along the Albemarle Sound and the rivers and tributaries that feed into the sound. The county and city are destinations for recreational boaters and have facilities at multiple locations to provide services and docking for the boaters.

### ***Education***

A majority (85.4%) of the population over 25 years of age have completed high school, compared to 85.8 percent of North Carolina citizens over the age of 25. Similarly, 19 percent of Pasquotank County citizens have a Bachelor's degree or higher, compared to 28.4 percent of state residents<sup>19</sup>.

Public education is overseen by the Elizabeth City-Pasquotank County School Board of Education. The Board administers seven elementary, two middle, and two high schools serving 5,907 students and employs 795 full time teachers and staff. The County also has one alternative school and six private schools<sup>20</sup>.

There are three institutions of higher learning – Elizabeth City State University, the College of the Albemarle, and Mid-Atlantic Christian University. All are located in Elizabeth City. Elizabeth City State University is a member of the University of North Carolina System. The College of the Albemarle is a constituent institution of the North Carolina Community College System. Mid-Atlantic Christian University is a private institution.

### ***Natural Attributes and Development***

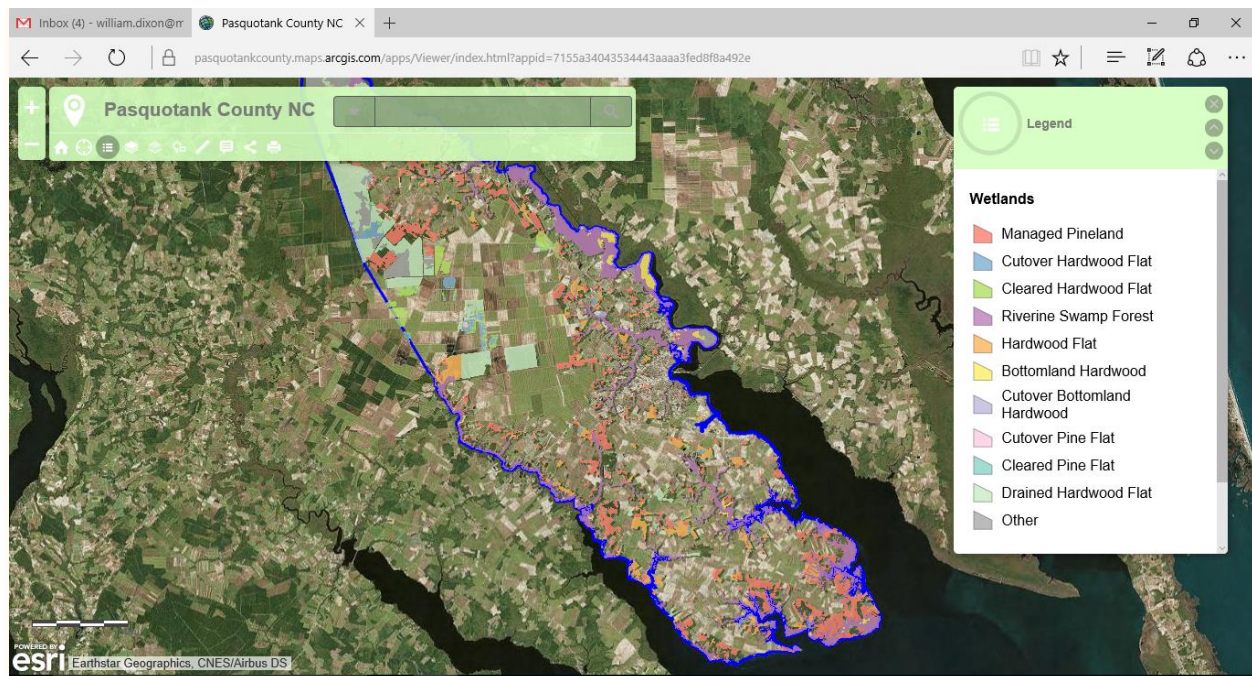
According to the U.S. Census Bureau, the county has a total area of 289 square miles, of which 227 square miles is land and 63 square miles is water. It is the fifth-smallest county in North Carolina by land area<sup>21</sup>.

The northeastern tip of Pasquotank County is part of the Great Dismal Swamp National Wildlife Refuge. Consisting of 111,200 acres of seasonally flooded wetland forests, the refuge is home to some of the most important wildlife habitat in the Mid-Atlantic region. Rare species of plants such as the silky camellia and log fern are only found in the swamp. The refuge is home to 96 bird species. It also has one of the largest concentrations of butterfly species in North Carolina and Virginia. Hugely popular with wildlife enthusiasts and scientists, the Great Dismal Swamp is a national treasure.

Being a coastal community, Pasquotank County has environmentally fragile areas that influence development. These areas include floodplains, non-coastal wetlands, soils, storm surge, areas of environmental concern and public water supply watersheds. Based upon the environmental conditions 70 percent of the county's land has moderate hazards and limitations for development. Due to the limitations, the environmental sensitive areas are best suited for less intense development, such as low density residential without a significant investment in public services. The soils with severe limitations for septic systems can be mitigated in areas where public sewer is available.

Non-coastal wetlands are found in the northwestern, western, and south central portions of Pasquotank County and make up approximately 29 percent of the County's land area. Generally, most of the soils in the County have substantial limitations for septic tank and light industrial uses. Due to the wetness, low strength, and restricted permeability, these soils have limitations for urban uses. Approximately 46 percent of the County's land area is subject to flooding from a storm surge of the most intense storm intensity and speed. Fifteen percent of the County's total land area is encompassed in a water supply watershed located in the northern portion of the County along the Pasquotank River, north of Knobbs Creek<sup>22</sup>.





Map 1: Pasquotank County Wetlands. Source: Pasquotank County GIS

Water quality is generally good within the Pasquotank River Basin. The main water quality issue within the Pasquotank River Basin is habitat degradation, including loss of riparian vegetation, channelization, and erosion. The Little River is the only water body within Pasquotank County not meeting water quality standards or which have impaired uses. There is no productive shell fishing or primary nursery areas located in Pasquotank County. Natural Heritage Areas within Pasquotank County are located in the extreme northwest tip of the County (Great Dismal Swamp National Wildlife Refuge) and in southern peninsula area of the county bordering on the Albemarle Sound (particularly the Big Flatty Creek and Little Flatty Creek areas)<sup>23</sup>.

With the exception of Elizabeth City, the majority of developed land within the County is located along the fringe of the City and the US 17 Business corridor. Elsewhere, developed lands are comprised primarily of widely scattered residential subdivisions and clusters of low density residential development. The predominant land use in the County is single-family detached dwellings and manufactured homes on individual lots.

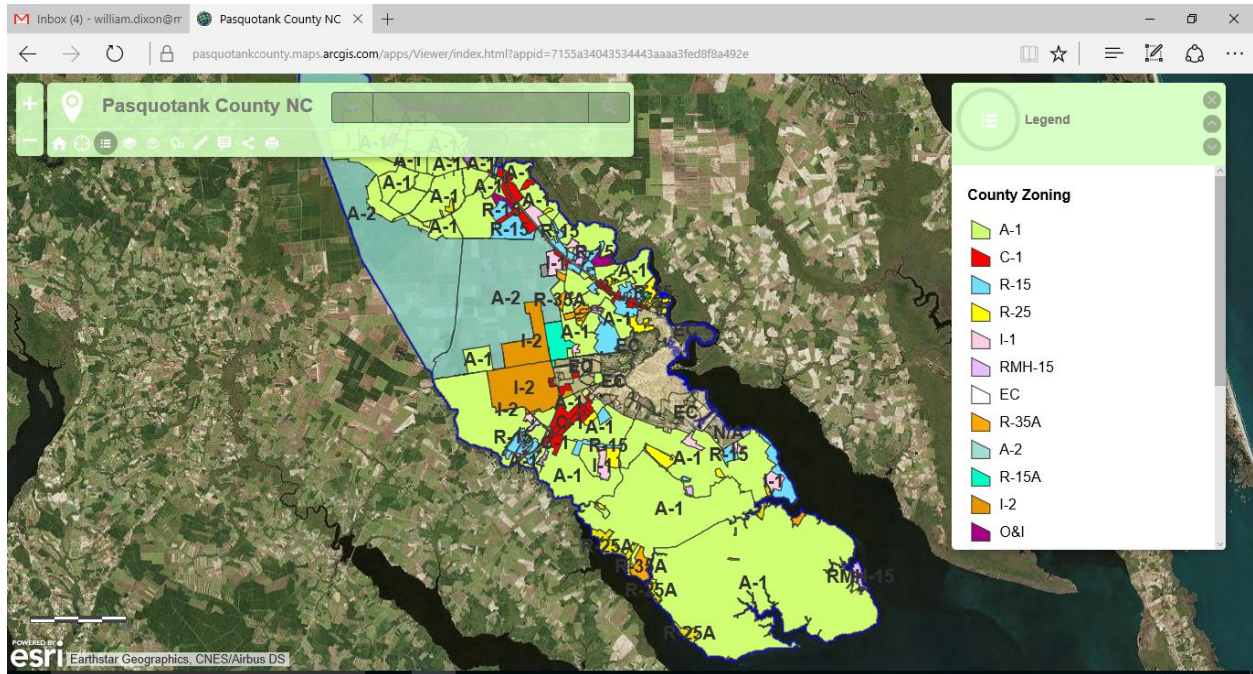


Agricultural land uses encompass approximately 45% of the total County land area. Farmland is scattered throughout the County and developed land uses are oftentimes randomly interspersed with agriculturally-used tracts. The majority of large agriculturally-used tracts are located in the west central portion of the County.

Along the US 17 corridor is where the overwhelming majority of commercial uses are found. The largest institutional land use within the Pasquotank County planning jurisdiction is the U.S. Coast Guard Base and the Elizabeth City Pasquotank County Regional Airport property located southeast of Elizabeth City adjacent to NC Highway 34. The largest concentration of industrial uses within the County's planning jurisdiction is located in the Pasquotank County Commerce Park.

Pasquotank County is zoned for Agricultural, Industrial, Commercial, Residential and other uses. The map below indicates zoning areas of the county. The legend is coded by use:

- A = Agricultural
- C = Commercial
- I = Industrial
- R = Residential
- RMH = Residential Manufacture Home
- P = Prison
- O&I = Office and Institutional<sup>24</sup>



Map 2, Pasquotank County Zoning. Source: Pasquotank County GIS

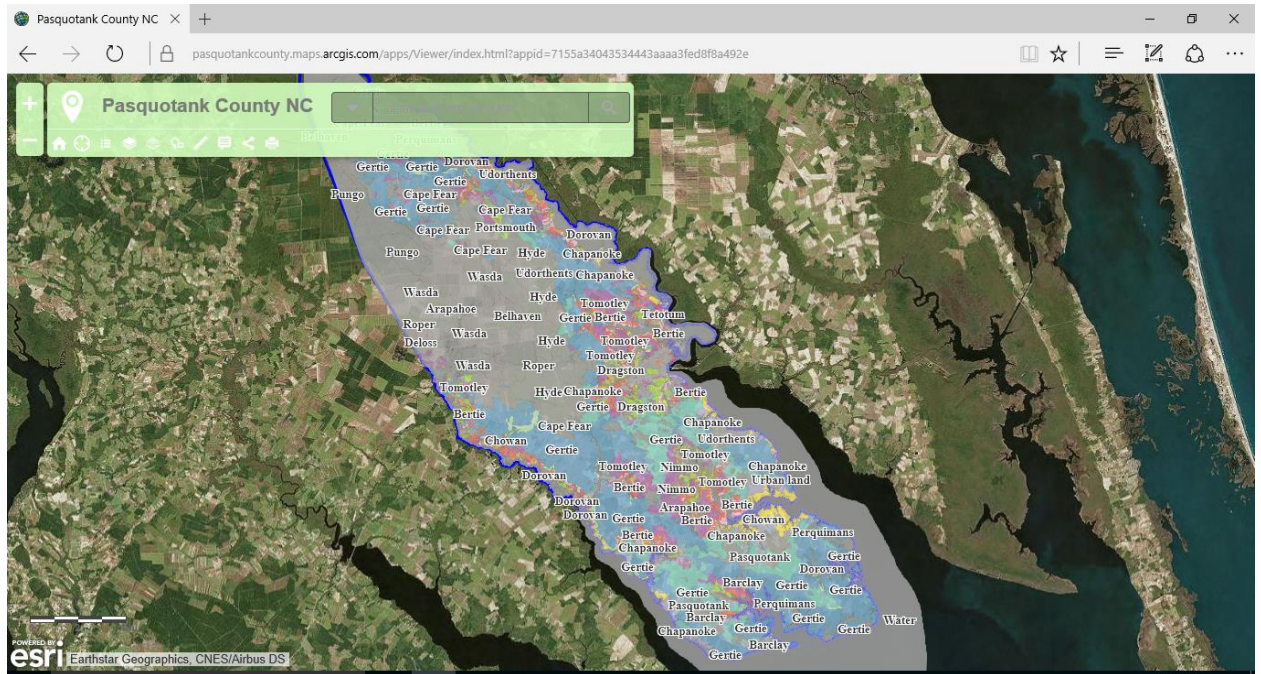
Both land and water are irreplaceable resources. A combination of best management practices and wise conservation must be employed to keep the resources in good condition.

### *Soils*

Soils are classified into different associations which help determine a soil's suitability for different uses. Soil uses include growing crops, growing trees and resident and commercial construction. Pasquotank County has seven major soil associations which are:

1. Belhaven-Pungo is very deep, very poorly drained soils that have a muck surface layer at least 16 inches thick over a loamy substratum, in pocosins of the coastal plain. This association makes up 9 percent of Pasquotank's soils. These soils are mainly used for woodland and wildlife habitat.
2. Wasda-Belhaven-Conaby-Pettigrew is very deep, very poorly drained soils that have a mucky surface layer and a loamy subsoil over a loamy substratum. Making up 10 percent of Pasquotank's soils, this association is mainly used for cropland and woodland.

3. Dorovan-Chowan is very deep, poorly drained and very poorly drained soils that have a mucky surface layer over a mucky or loamy substratum. Found on nearly level flood plains, creeks and rivers, this association makes up 6 percent of Pasquotank's soils. Main uses include woodland and wildlife habitats.
4. Hyde-Cape Lookout-Portsmouth is very deep, very poorly drained soils that have a loamy surface layer and a loamy or clayey subsoil over a loamy, sandy, or clayey substratum. Found on marine terraces, this association makes up 13 percent of the soils in Pasquotank County. Main uses are for cropland and woodland.
5. Gertie-Perquimans-Tomotley is very deep, poorly drained soils that have a loamy surface layer and subsoil over a loamy or sandy substratum. Located on marine terraces throughout the county, this association makes up 38 percent of Pasquotank County. These soils are mainly used for cropland and woodland.
6. Chapanoke-Yeopin is very deep, moderately well drained and somewhat poorly drained soils that have a loamy surface layer and subsoil over a loamy or sandy substratum. Found on marine terraces of the Coastal Plain of Pasquotank County, this association accounts for 6 percent of soils in the county.
7. Bertie-Tomotley-Dragston is very deep, somewhat poorly drained and poorly drained soils that have a loamy surface layer and subsoil over a loamy or sandy substratum. Found on marine terraces, stream terraces, and flood plains of the Coastal Plain, this association makes up 18 percent of the soils in Pasquotank County.<sup>25</sup>



Map 3. Pasquotank County Soils. Source: Pasquotank County GIS

## Pasquotank County: the State of Agriculture

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Agriculture accounted for 7.1 percent of Pasquotank County's employment in 2012. According to Mike Walden in 2012, agriculture and agribusiness added \$109,881,023 or 7.9 percent of the county's value added total income<sup>26</sup>. Pasquotank County ranks 50<sup>th</sup> out of 100 counties in cash receipts from agriculture<sup>27</sup>.

The number of farms in Pasquotank County has decreased from 2002 to 2012, according to the US Census of Agriculture with 157 farms in 2002 and 136 in 2012. The amount of total farmland in Pasquotank County decreased from 99,432 acres in 2002 to 72,270 acres in 2012. The average farm size decreased from 633 acres in 2002 to 531 acres in 2012. Of the farmland in Pasquotank County 67,720 acres were used in crop production in 2012<sup>28</sup>.

### *Crops*

According to the North Carolina Cooperative Extension Pasquotank County Center estimates, in 2017 the county produced:

- 15,000 acres of wheat
- 55,000 acres of soybeans
- 500 acres of cotton
- 16,000 acres of corn
- 3,000 acres of cabbage
- 3,000 acres of potatoes for chips<sup>29</sup>

Additionally, Pasquotank ranked 7<sup>th</sup> in wheat production and 9<sup>th</sup> in vegetable and fruit production in North Carolina according to the North Carolina Department of Agriculture and Consumer Sciences<sup>30</sup>.

### *Livestock*

The value of beef cattle grown in Pasquotank County in 2012 was \$520,573, ranking the county 97<sup>th</sup> in the state of North Carolina<sup>31</sup>.



### ***Horses***

The horse industry is a vital part of the Pasquotank County agricultural economy and cultural heritage. In 2009, Pasquotank was home to 780 horses with a value of \$4,714,000<sup>32</sup>.

### ***Farmers Markets***

There are two farmers markets operating in Elizabeth City. One is located on Pritchard Street that operates Tuesdays, Fridays and Saturdays, 8am until 4pm, May until December. The downtown waterfront farmers market in Mariners' Wharf which is open Saturdays, 9am until 1pm from May through October. These markets offer local farmers outlets to sell produce and other products.

### ***Forestry***

Pasquotank County forestland totals 31,156 acres, with nearly 100 percent owned by private landowners. According to North Carolina Cooperative Extension, the income from timber sales in 2012 was \$3.7 million. The total forest industry economic impact to Pasquotank County was \$75.8 million. Four-hundred and nine people are employed in the Pasquotank County forest industry<sup>33</sup>.

### ***Farmer Demographics***

The number of full-time farmers in Pasquotank County from 2002 to 2012 showed a decrease of 17.4 percent. The number of part-time farmers shows a decrease of 4.2 percent during the same time period. The average age of farmers in Pasquotank County was 58.8 years of age in 2012. In 2002, the average age was 52.7 years of age. Principal operators by gender were 126 male and 10 female. The majority of the farm owners are white, with 25 percent of farms owned by African-Americans<sup>34</sup>.

The following chart represents principal farm operators' primary occupation—full-time or part time. Data is shown for 2002, 2007 and 2012.

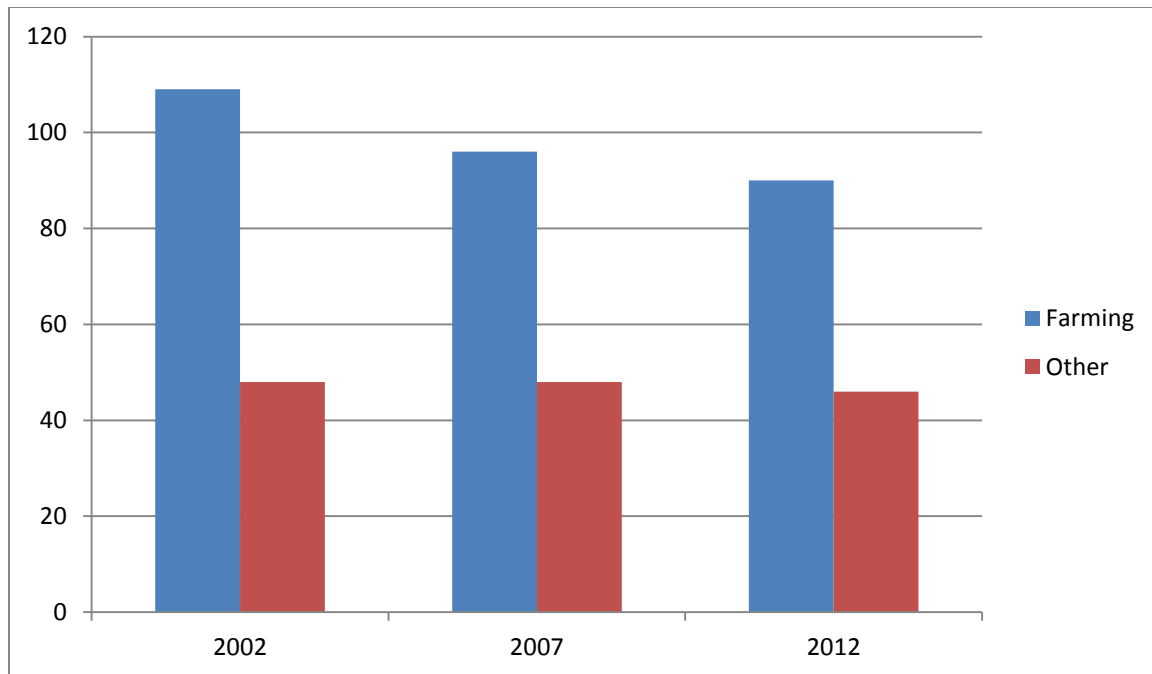


Figure 1: Primary Occupation of Pasquotank County Farmers. Source: US Census of Agriculture.

# Farm and Forest Protection Programs

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(Compiled by John Bonham, 2009)

## *Present-Use Value Tax Program*

Present-Use Value, or PUV, is a program established by N.C.G.S. §§ 105-277.2 to .7 and administered by the county assessor through which qualifying property can be assessed, for property tax purposes, based on its use as agricultural, horticultural or forest land. The present use value is the value of the land based solely on its ability to produce income. Qualifying property is assessed at its present-use value rather than its market value. The tax office also maintains a market value for the land, and the difference between the market value and the present-use value is maintained in the tax records as deferred taxes. When land becomes disqualified from the program, the deferred taxes for the current and three previous years, with interest, will usually become payable and due.

## *Basic Requirements*

Minimum acreage of production land:

- 10 acres for agricultural use
- Five acres for horticulture use
- 20 acres for forest use

Production must follow a sound management plan.

Agricultural and horticultural land must have at least one qualifying tract that has produced an average gross income of at least \$1,000 for the three years preceding the application year.

Forest land must be following a forest management plan.

## *Benefits*

Protection from increasing land values that are based on development potential and the potential increase in property taxes



More information can be found at  
<http://www.dor.state.nc.us/publications/property.html>.

### ***Voluntary Agricultural Districts (VAD)***

Established by N.C.G.S. §§ 106-737 to 743 and administered at the county level, Voluntary Agricultural Districts are designated areas where commercial agriculture will be encouraged and protected. The purposes of the districts are to increase identity and pride in the agricultural community and to increase protection from nuisance suits and other negative impacts on properly managed farms.

### ***Requirements***

Land must be enrolled in the Present-Use Value program or otherwise be determined to meet the qualifications of the program.

The landowner must enter into a revocable agreement to limit development for a 10-year period.

### ***Benefits***

- Notification to buyers of nearby property that they're moving into an agricultural area
- Abeyance of water and sewer assessments
- Public hearings on the condemnation of farmland
- Stronger protection from nuisance suits
- Representation by an appointed board regarding concerns on threats to the agricultural sector

### ***Enhanced Voluntary Agricultural Districts (EVAD)***

Established by N.C.G.S §§ 106-743.1 to .5, an Enhanced Voluntary Agricultural District is a VAD formed of one or more farms that are subject to an IRREVOCABLE 10-year agreement to limit development. In return for the condition of irrevocability, the landowner receives the added benefits of being able to receive 25 percent of gross revenue from the sale of non-farm

products and still qualify as a bona fide farm, and being eligible to receive up to 90 percent cost-share assistance from the Agricultural Cost-Share Program.

### ***Conservation Easements***

A conservation easement is a written agreement between a landowner and a qualified conservation organization or public agency under which the landowner agrees to keep the land available for agriculture and to restrict subdivision, non-farm development and other uses that are incompatible with commercial agriculture.

### ***Basic Requirements***

Permanently foregoing the right to subdivide or develop the land being conserved. There will be other limitations on activities to preserve the land's productivity, environmental values and rural character. Cash payments in the range of \$20,000 to \$40,000 are needed to cover the costs of the transaction. These costs are for legal services, a survey, an appraisal, long-term stewardship services provided by the conservation partner and other miscellaneous activities. In some cases, grant funds will cover these costs.

### ***Other Information***

A portion of the property can be left out of the easement, thereby providing an area for future homes and other non-farm activities.

Agricultural activities, including forestry, are allowed under the agreement.

Despite the term "easement," access to the public is not provided by the agreement.

The value of a conservation easement is determined by a licensed land appraiser and is typically between 25 percent and 75 percent of the land's market value.

A periodic inspection of the property is required to ensure that development does not occur. This provision will be included in the agreement.

The agreement is recorded on the county's land records and runs with the title. All future landowners must comply with the terms and conditions of the agreement.

### ***Financial Benefits***

If the conservation easement is donated, then the landowner will likely qualify for a federal income tax deduction and a state income tax credit. The value of these benefits depends on the appraised value of the easement and the income tax situation of the landowner.

A conservation easement also can be sold by the landowner through a transaction commonly referred to as a Purchase of Development Rights (PDR) or Purchase of Agricultural Conservation Easement (PACE). Funds to purchase a conservation easement can be raised from private and government sources. North Carolina and the federal government have programs to purchase agricultural conservation easements. Funding through these programs is very competitive and will generally amount to a percentage of the easement's value. The tax benefits described above can be claimed for any of the easement's value above the purchase price.

### ***Term Conservation Easements***

Also called Agricultural Agreements, these agreements are similar to conservation easements but apply for a finite period of time agreed to by the landowner and conservation partner.

### ***Transfer of Development Rights***

A program set up by local units of government that utilizes conservation easements to preserve farmland by providing incentives to increase development density in a designated area. The program identifies the "sending area" where conservation is being encouraged and the "receiving area" where development is preferred. A landowner in the receiving area can purchase a conservation easement on a property in the sending area and receive additional density allowances. In North Carolina, counties must receive authorization from the General Assembly to develop and implement a TDR program.

### ***Farm Transition Planning***

Making careful plans for the transfer of ownership of farm property and assets from the current owner to the next can be enough to preserve a farm for decades. Many options are available when planning an estate or land transfer. Farm owners can increase the likelihood of a successful transition that maintains the viability of the farm by obtaining professional assistance early in the process.

### ***Right-to-Farm Law***

North Carolina has a state right-to-farm law (N.C.G.S. §§ 106-700 to 701(2006)) that protects farm and forestry operations from being declared a nuisance as long as they have been in operation for at least one year and are operated properly and without negligence.

### ***N.C. Agricultural Development and Farmland Preservation Trust Fund***

N.C.G.S. § 106-744(c) established a trust fund to be administered by the Commissioner of Agriculture. The purpose of the trust fund is to provide monies to purchase agricultural conservation easements and to fund programs that promote the development and sustainability of farming, and the transition of existing farms to new farm families. Counties and nonprofit conservation organizations can apply for grants for these purposes.

## Challenges, Opportunities and Trends: Survey and Interview Results

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The methodology employed to access information, perceptions and attitudes related to agriculture and agribusiness in Pasquotank County consisted of written surveys and interviews with three target audiences—agriculture producers, agribusiness owners and non-farm residents of Pasquotank County. Surveys were distributed by the Pasquotank County Center of the North Carolina Cooperative Extension Service.

In addition, the Cooperative Extension Service recommended key leaders in Pasquotank County from all three targeted groups that were interviewed to better identify challenges and opportunities that exist in the county's agricultural segment. All descriptive statistics presented in this document were calculated using data obtained from these processes. Survey and interview information revealed pertinent information on the state of agriculture in Pasquotank County from the perspectives of farmers, agribusinesses, and non-farm residents as well as from data sources such as USDA and NCDA.

The results identify specific challenges and opportunities affecting the future of agriculture in the county.

### *Agriculture Producer Analysis*

A review of the 2012 Census of Agriculture revealed that there were 136 farms in the county being cultivated by 126 male and 10 female operators. Pasquotank County farmers are predominantly white with 152 white operators, 25 African American operators, and 2 Hispanic operators. The average age of Pasquotank farmers was reported as 58.8 years in 2012. Farmers providing information for the Pasquotank County Agricultural Development Plan represented operations from across the county. The average age of survey respondents was 47.3 years, which is younger than the 2012 US Census of Agriculture data<sup>35</sup>.

According to the survey, the majority of operations (87%) were defined as farming only with 14.3percent as primarily farming with some timber production.

Seventy-one percent of Pasquotank County farmers surveyed indicated that they had been in operation for more than 20 years. Additionally, 14 percent have farmed 10-20 years with another 14 percent have farmed 0-9 years. (Figure 2)

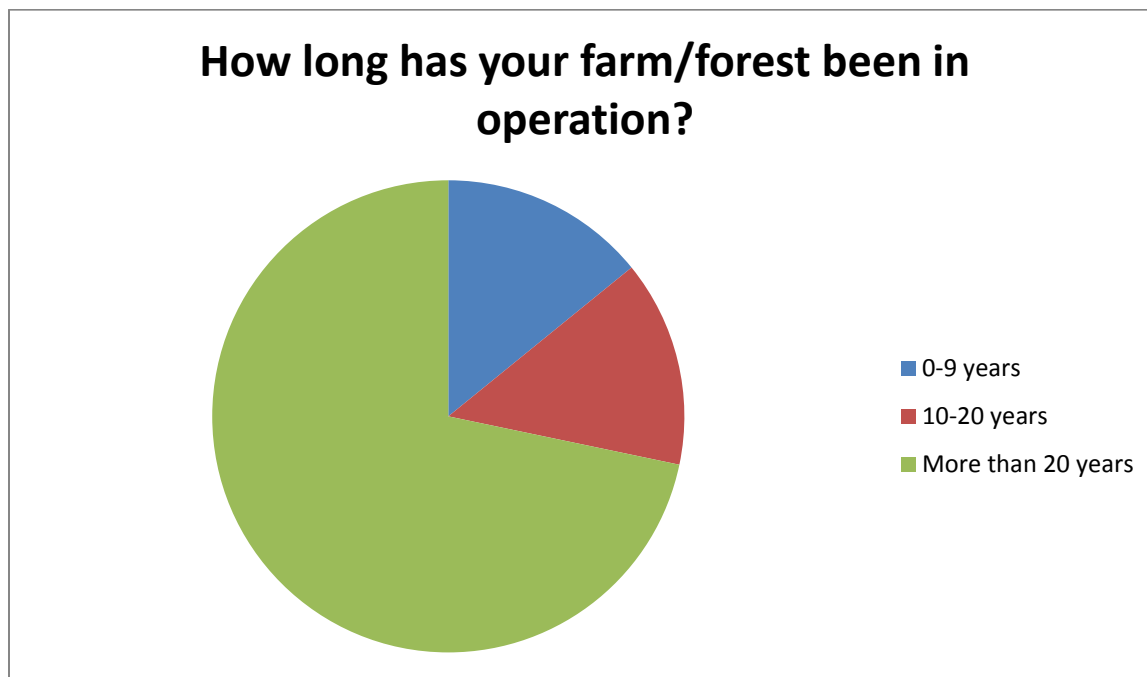


Figure 2. Source: Pasquotank Producer Survey 2017

Almost 86 percent of the responding farmers indicated that their operations provided the majority of their household income. Of the farmers responding, 57 percent have expanded their operations during the last five years. Forty-three percent have not expanded during the same time period. Of those who wanted to expand but did not, listed the following reasons:

- Lack of available land to rent
- Lack of available land to purchase
- Age of owner/operator

Notably, 43 percent of farmers surveyed stated that they did not own sufficient property to expand or diversify their operation. This indicates the need for leasable land for operational expansion in Pasquotank County.

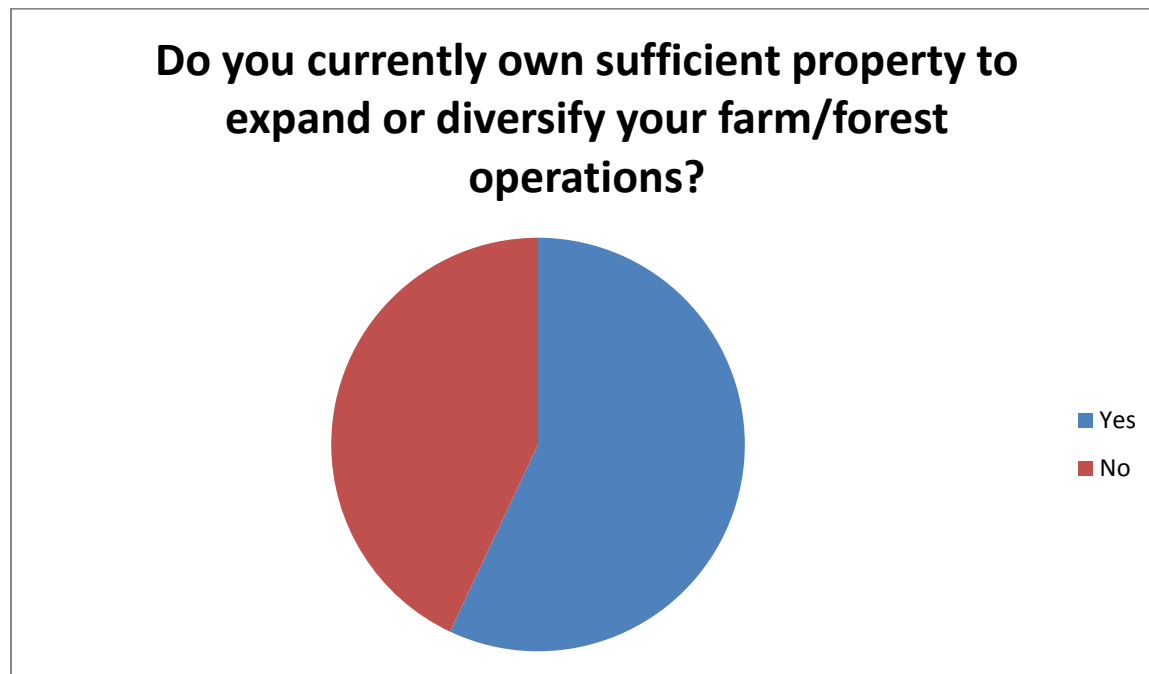


Figure 3. Source: Pasquotank Producer Survey 2017

Farmers who participated in the surveys identified the most critical issues expected to influence future farming operations by the following percentages:

- |                                  |     |
|----------------------------------|-----|
| - High production input cost     | 71% |
| - Low commodity prices           | 71% |
| - High land rental rates         | 71% |
| - Competition for available land | 57% |
| - Available labor                | 43% |
| - Affordable labor               | 43% |
| - Development pressure           | 29% |
| - Export demand for products     | 29% |

Additional information from the farming community indicated that upon retirement, 100 percent of farmers expected to transfer the farm to family members for continued operation as a family farm. However none have farm transition plan. In fact, 43 percent of surveyed farmers had not shared their

thoughts on farm transition with their family members. This indicates a need to have training for farm owners and their families on developing effective farm transition plans. Family farms are the backbone of agriculture in North Carolina, educating farmers on how to pass their farms on to heirs or another generation of farmers is essential to the future of agriculture.

Pasquotank County offers a deferred tax program beneficial to farmers and landowners designated as the Present Use Value Taxation program (PUV). This program offers owners of forest land and those operating legitimate farms a deferred tax program based upon their present use in agriculture, horticulture, or forest land. Fifty-seven percent of survey respondents answered that they were enrolled in the PUV program. Almost 29 percent answered that they did not know whether or not their farmland was enrolled. Fourteen percent of respondents stated that their farms were not enrolled in the PUV (Figure 4) These results indicate a definite need to educate all landowners on the benefits of the PUV program. While an increased knowledge of this program could result in additional land enrolled in the program and, in turn, reduce tax revenues, the cost of community services for agricultural land versus residential land shows that the revenue outcome still provides a net gain to the county coffers.

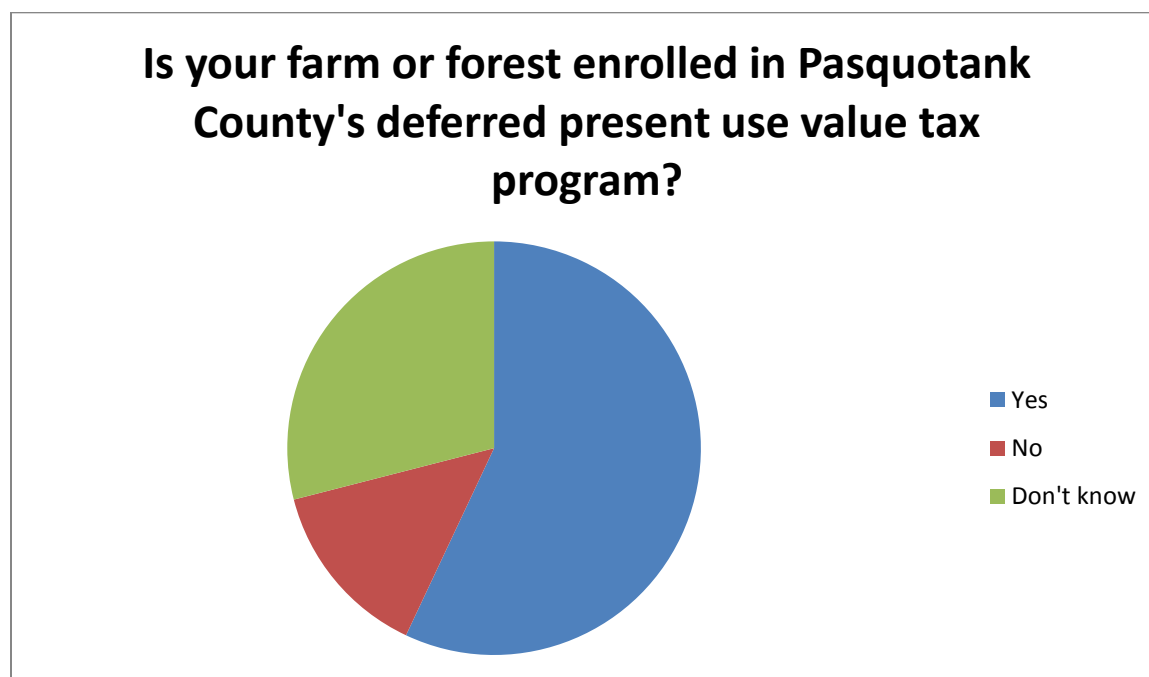




Figure 4. Source: Pasquotank Producer Survey 2017

When Pasquotank County farmers were asked to identify taxes that were impediments to their profitability, respondents listed the following:

- Local property taxes on buildings and equipment
- Estate taxes
- Federal income tax
- Federal payroll taxes.

In 2012, nearly one hundred percent of forest land in Pasquotank County was privately owned. Only thirty-three percent of respondents had forest management plans, and 67 percent responded that they had no such plans. A forest management plan is a valuable tool for farmers and landowners to use these woodlands for greater sustainability and profitability. Management plans are required for forest landowners to enroll properties in the county's Present Use Value program. The survey data indicates the need for the development of an educational program to inform and train landowners on the benefits of a formal forest management plan.

In Pasquotank County, no producer survey respondents indicated experiencing problems with neighbors in regard to their farming operation. However, farmers did indicate specific problems with drainage and roads.

Pasquotank County leaders enacted a Voluntary Agricultural District Program in 2010. Since its inception, 51 farms have been enrolled with a total of 3,425 acres. Seventy-one percent of farmers responding to the survey were aware of the Voluntary Agricultural District program. The remaining respondents were not aware of the program. The county has not adopted an Enhanced Voluntary Agricultural District program.

Agricultural producers during the survey expressed a need for management, technical and marketing training on the following topics to enhance their operations:

- Federal and state contracts	100%
- Estate planning/Farm transition	83%
- Marketing and sales promotions	80%
- Identifying and managing risks	60%
- Forward pricing and hedging	60%
- Organizing buyer/seller groups	40%
- Direct to consumer marketing of products	20%
- Timber management	17%

There are multiple opportunities for training and education. This information should serve as a continuing guide for agencies and institutions involved in education with the county to develop plans for short-term and long-term training to serve the agricultural community.

Pasquotank County farmers who were surveyed and interviewed recognized the value of educating the non-farm public as to the benefits of agriculture to the county. Eighty-six percent of farmers surveyed were in favor of a program to increase non-farm residents' knowledge of the social and economic benefits of agriculture.

Pasquotank County farmers and operators who responded to the survey (100%) stated that there is a definite need for agricultural education in public schools, 4-H and youth development, community colleges and other colleges and universities. Figure 7 shows the strong support for such programs, which illustrates the need to train youth in the importance of agriculture and the diverse agricultural career opportunities. Additionally, farmers surveyed (80%) would train an intern on their farm to encourage the next generation to enter production agriculture.

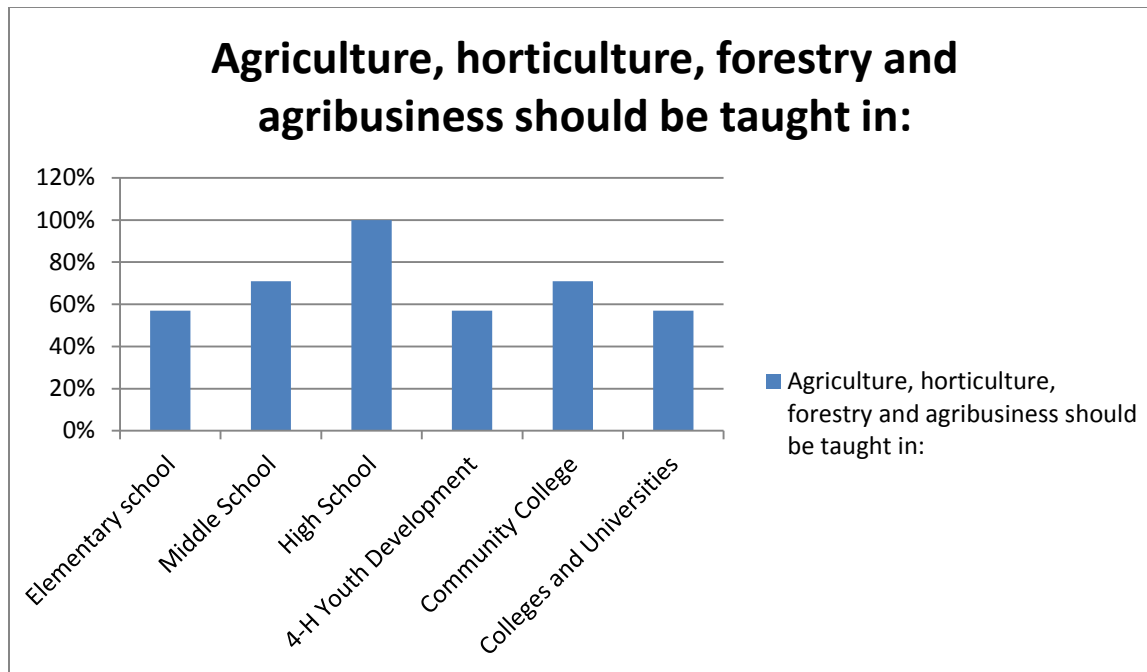


Figure 5. Source: Pasquotank Producer Survey 2017

Surveyed farmers in Pasquotank County were in favor of using government funds to support agriculture and agricultural economic development in the county.

Interviews were conducted with a cross-section of farmers to obtain their opinions on the issues, challenges and opportunities impacting agriculture in Pasquotank County. The following were stated as issues that impacted family farms as well as the perpetuity and profitability of these operations:

- Need for farm and estate transition planning. All farmers interviewed recognized the importance of planning, but few had formal plans. Issues related to estate planning identified included no one in next generations to take over farming, equitable treatment of all heirs, and estate taxes.
- Housing development pressures resulting in loss of farmland.
- County government officials are supportive of agriculture and agribusiness.

- High input costs. Farmers expressed concern over the expense of new equipment and technology. Low commodity prices make it hard to justify investments in new technology.
- Drainage issues due to increased housing development. Drainage ditches are being filled in by housing developers resulting in flooding during rain events.
- Traffic congestion and road construction make it difficult for farmers to move equipment from one farm to another during planting and harvesting seasons.

### *Agribusiness Interviews Analysis*

Agribusinesses provide essential resources and services vital to the success and profitability of agriculture production services. Agribusinesses, just as any other business, provide jobs and employment, which stimulate the local economy. Agribusinesses represent crop consultants, agriculture processors/distributors, agricultural lenders and insurers, and horticulture services.

Following is a list of challenges and opportunities expressed by the respondents that will have an effect on agriculture in the future:

- A need exists for farm transition training and estate planning to help farm owners and their families transfer farmland to future generations. Agricultural lenders said that most farm owners do not have written plans for farm succession. They also discussed the reluctance of the next generation to continue operating the farms.
- Farmers and agribusiness owners need more qualified employees to operate service and maintain today's complex technology and equipment. Agribusiness operators suggested more education and training in high school and technical/trade schools as a means of filling this shortage of qualified employees. Agribusiness owners also suggested paid internships and scholarships as a tool in solving this problem.
- Loss of farmland to housing development and other non-farm uses is a concern in Pasquotank County. Recently the county has seen resurgence

in housing construction that had slowed during the recent economic recession. Loss of farmland to wind and solar farms is also a concern. While lease payments to the landowners are significant, some worry about the future impact to the land.

- Because of low profit margins, some farmers lack sufficient capital to purchase new technology and equipment needed to reduce annual input cost and more efficiently manage crop production and harvesting.
- The general public does not understand the importance of agriculture to the local economy, not does it realize the huge investments that farmers make just to produce a crop.
- The majority of commodities grown in Pasquotank County rely on contracts and processing located outside the county. County agribusiness leaders expressed the need for developing further value added processing closer to the farm gate in order to maximize profits.
- All of those questioned said that youth education in the field of agriculture is of great importance, and continued support of these programs in secondary and post-secondary schools is essential to the future of agriculture.

### ***Non-Farm Resident Survey and Interview Analysis***

Pasquotank County is home to people of diverse backgrounds. Some have lived in the county their whole lives, others have chosen to relocate or retire to the rural county, and some have been drawn to the history of Elizabeth City and the lure of being close to the water. Still others have moved to Pasquotank County from Virginia, choosing to commute from a rural area with lower taxes. The majority of survey respondents (83%) have lived in Pasquotank County for 20 years or more. All of the respondents have lived near a farm or forest operation, with 67% living within one-quarter mile of a farm or timber operation. A positive result of this close relationship with agriculture is that 100 percent stated that farmers are good neighbors.

When asked about the state of agriculture as a viable industry in Pasquotank County, 66 percent of the respondents felt that farming is holding its own and has some potential for future growth. Seventeen percent said that agriculture

has no potential for future growth, while another seventeen percent felt that agriculture is an expanding industry with significant future growth potential.

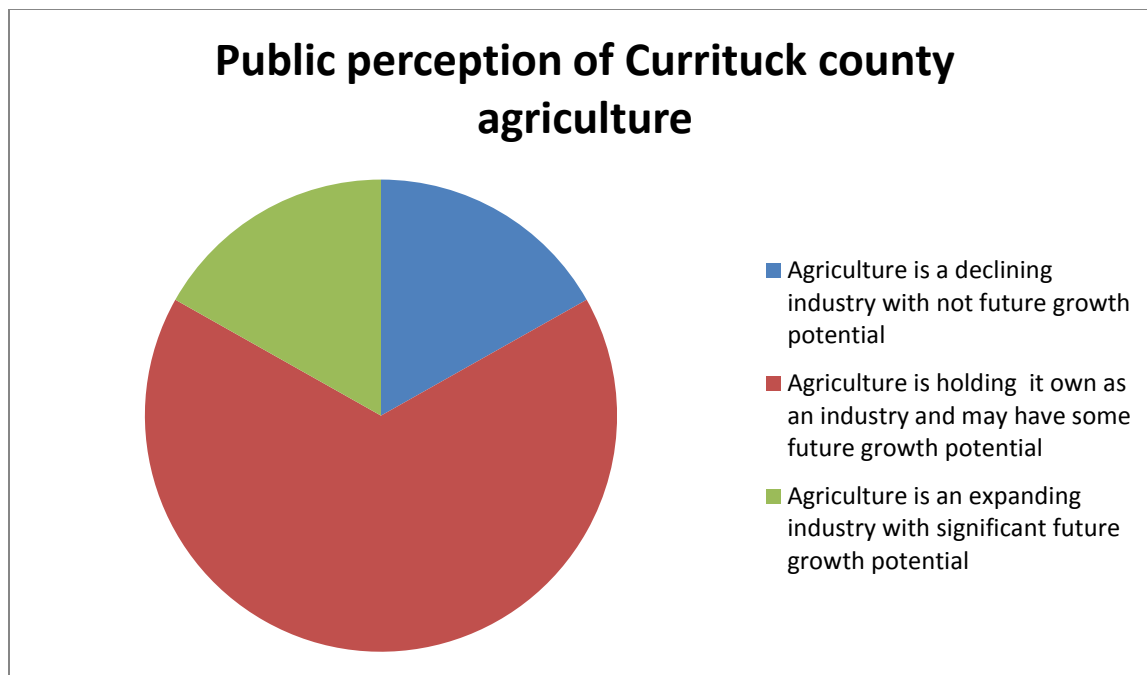


Figure 6. Source: Non-Farm Resident Survey 2017

Pasquotank County non-farm residents have a good understanding of the economic impact of the entire agricultural sector on the county's economy. The value of agricultural industry in 2012 provided a total economic impact of \$109,881,032 to Pasquotank County<sup>36</sup>.

One hundred percent of surveyed non-farm residents felt that Pasquotank County should take steps to help preserve farms and forests. One hundred percent of respondents reported that they support local farming by purchasing local produce from farmers markets; pick-your-own operations, and road side stands. Eighty-three percent of non-farm residents say that they purchase plants from local greenhouses and nurseries. One hundred percent have participated in agritourism activities such as corn mazes, pumpkin patches and hayrides.

The statistics below reveal non-farm residents agreement or disagreement with statements about agriculture in Pasquotank County:

- 100 percent agreed farms and forests enhance scenic beauty and open space
- 100 percent agreed farmers are good neighbors
- 100 percent agreed that local farmers deliver high quality products
- 100 percent agreed that farming has a positive impact on the environment
- 100 percent stated that farming and agribusiness are high technology businesses
- 67 percent agreed farming presents a good career for enterprising people
- 83 percent agreed that agriculture and forestry is a viable career opportunities
- 83 percent stated that tax breaks for farmers are important
- 100 percent would support farm and forest preservation efforts in the county
- 100 percent would support the use of government funds for farm and forest development

These statements clearly illustrate that non-farm residents surveyed have a positive image of agriculture in the county.

Personal interviews with non-farm residents substantiated the finding in the surveys. The interviewees were 100 percent in support of farmland preservation efforts in Currituck County and were in favor of using local government funding to ensure policies and programs that encourage the preservation of agriculture.

The following statements from non-farm residents in Pasquotank County revealed the following threats:

- Farmland being lost to housing developments, subdivisions
- Aging farm owners

- Development pressure from wind and solar farms
- Foreign competition in agricultural commodities
- Lack of young farmers to take over existing operations
- Chemical run-off and crop dusting

Potential opportunities as seen by non-farm residents:

- Specialty farming
- Farmers markets
- Farm to Table opportunities with Coast Guard Base and Elizabeth City State University
- New technology in farm equipment and processes
- Further diversification of agricultural commodities
- Future interstate designation

Non-farm residents value Pasquotank County agriculture and are in favor of preserving and enhancing this vital economic sector. It is critically important to have a citizenry that is supportive of the preservation of the agricultural industry.



## Recommendations

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The major result of the Pasquotank County Agricultural Development Plan is a set of recommendations with actions steps that, when implemented, will bring about desired change. These steps are based on input from the citizens affected by the plan as well as from other agricultural sources. The following recommendations are extrapolated from the data obtained through interviews and surveys of Pasquotank County farmers, agribusinesses and citizens and data from USDA and NCDA&CS.

For this plan to be effective, Pasquotank County citizen leaders, agencies and organizations must follow through with support and collaboration of these recommendations. This plan needs to be evaluated annually to keep it up to date and viable. The annual update will ensure that recommendations are being accomplished and new ones added as needed. Following are recommendations that can be used to maintain and enhance agriculture in Pasquotank County.

### *Recommendation One:*

#### **Support measures to protect and promote forest and farmland in Pasquotank County.**

Endorsement, certification and advocacy of the Pasquotank County Agricultural Development Plan are critical to protecting and enhancing agriculture in the county. Once the plan is endorsed by the Pasquotank County Board of Commissioners and certified by the North Carolina Department of Agriculture and Consumer Services, the county will receive priority status for funding from the NCDA&CS's Agricultural Development and Farmland Preservation Trust Fund for agricultural projects. Though residents largely support agriculture, added education and understanding is needed. County officials should be informed of agricultural information affecting Pasquotank County.

### ***Action Steps***

- Present the Pasquotank County Agricultural Development Plan to the Board of Commissioners for endorsement and submit to NCDA&CS for certification.
- Appoint a Pasquotank County Agriculture Advisory Board to oversee and manage the plan for the benefit of agriculture in the county.
- Annually review the plan for progress and addition of any needed new recommendations.
- Utilize all available media outlets to inform county leadership and the public about the plan's progress and success.
- Develop and implement an educational program for farmers and landowners regarding available farmland preservation tools and incentives suited for Pasquotank County.
- Educate landowners and farmers of the benefits of Present Value Taxation that will encourage enrollment.
- Encourage local government, economic developers, land developers, planners, the North Carolina Division of Coastal Management and the North Carolina Department of Transportation to work with the Pasquotank County Agricultural Advisory Board to informing and engaging them in county projects that will impact agricultural production.

### ***Timeline:***

County Commissioners should endorse the Pasquotank County Agricultural Development Plan by February 2018. Efforts to increase agricultural awareness and representation should begin in mid-2018.

### ***Responsible Parties:***

Pasquotank County Agricultural Advisory Board, Pasquotank County Cooperative Extension, Albemarle Soil and Water Conservation District, North Carolina Forest Service, Pasquotank County Economic Development, Pasquotank County Planning and Community Development, and Pasquotank County Board of Commissioners.

### ***Recommendation Two:***

#### **Promote and Increase enrollment in Voluntary Agricultural District (VAD) and adopt and implement Enhanced Voluntary Agricultural District (EVAD) Programs**

Pasquotank County has Voluntary Agricultural District ordinance that was adopted in 2010. Since its inception, 51 farms have been enrolled with a total of 3,425 acres. This is a small percentage of the Pasquotank County farmland.

#### ***Action Steps:***

- The Pasquotank County Agricultural Advisory Board will provide leadership in promoting the Pasquotank VAD ordinance.
- The Pasquotank County Commissioners will investigate the benefits of adopting an Enhanced VAD ordinance.
- Design and implement a marketing plan using all available media to educate farmers, land owners, developers and realtors on the benefits of VAD ordinance.
- Have appropriate agency staff encourage and assist landowners with understanding and enrollment in VAD.

#### ***Timeline:***

Targeted promotion of VAD and the investigation of the benefits of EVAD should begin during the second quarter of 2018.

#### ***Responsible Parties:***

Pasquotank Agricultural Development Advisory Board, in conjunction with Pasquotank County Cooperative Extension, will lead the process of creating the EVAD ordinance. The following agencies will cooperate: Pasquotank Farm Bureau Board, Albemarle Soil and Water Conservation District, USDA Farm Service Agency and Natural Resource Conservation Service, Pasquotank County Tax Office, Pasquotank County Register of Deeds, Elizabeth City/Pasquotank County Economic Development, Pasquotank County Planning and Inspections Department and Pasquotank County Board of Commissioners.

### ***Recommendation Three:***

#### **Develop and conduct programs to assist Pasquotank County farm and forest landowners with farm transition planning.**

The average age of farmers in Pasquotank County was 58.8 years in 2012. According to surveyed farmers, none have formal farm transition plans. Additionally, interviews with farm lending authorities showed lack of farm transition planning as a leading concern about the future of agriculture in the area. Eighty percent of farmers surveyed indicated a willingness to train an intern/young farmer within their farming operation to encourage the next generation to enter production agriculture.

#### ***Action Steps:***

- Plan and conduct a series of workshops that uses a variety of specialists and agencies to provide information on farm transition and estate planning.
- Develop an apprenticeship program in which young farmers work with experienced producers to learn more about agricultural production and gain more knowledge about transition opportunities.
- Identify farmers willing to investigate innovative strategies for farm transition with beginning farmers.

#### ***Timeline:***

Farm transition workshops should start in the fall of 2018 and repeated yearly. In the spring of 2019, a study should be conducted on the feasibility and interest in a farm apprenticeship/mentoring program.

#### ***Responsible Parties:***

Pasquotank County Agricultural Advisory Board, Pasquotank County Cooperative Extension, Pasquotank County Farm Bureau, Ag Carolina/Farm Credit, University of Mount Olive Lois G. Britt Agribusiness Center, local attorneys and agricultural economic specialists.

#### ***Recommendation Four:***

#### **Promote appreciation and awareness of the benefits of agriculture to Pasquotank elected officials and citizens.**

Today, the majority of the general population is removed from farming and agribusiness. The public needs to understand the importance of agriculture to the local economy. Additionally, non-farm residents need to appreciate where food and fiber is produced. Understanding agriculture will provide stronger relationships between producers and consumers as well as additional support local farms.

#### ***Action Steps:***

- Develop a comprehensive agriculture awareness plan and determine all feasible delivery presence such as social media, speakers' bureau, print and broadcast media.
- Conduct annual farm tour to promote Pasquotank's diverse agricultural operations including forestry, row crop farming, road side markets, specialty crops and agritourism.
- Develop presentations that show the role of agriculture in Pasquotank County to be shared with civic, school and religious organizations.
- Expand and promote events that highlight the local foods movement.
- Involve 4-H and FFA members in the promotion of agriculture.

#### ***Timeline:***

Efforts should begin after the adoption of the Pasquotank County Agricultural Development Plan in 2018.

#### ***Responsible Parties:***

Pasquotank County Agricultural Advisory Board, Pasquotank County Cooperative Extension, Pasquotank County Farm Bureau Board of Directors, North Carolina Department of Agriculture and Consumer Services, University of Mount Olive Lois G. Britt Agribusiness Center, USDA Farm Service Agency, Albemarle Soil and Water Conservation District, and Elizabeth City-Pasquotank Public Schools.

### ***Recommendation Five:***

#### **Expand and Support Youth Agricultural Educational Programs.**

Agribusiness leaders, farmers and non-farm residents were all in favor of youth agricultural education as an important to the future of agriculture in Pasquotank County.

#### ***Action Steps:***

- Encourage youth to actively participate in all agricultural organizations such as FFA and 4-H in order to develop leadership skills and agricultural experiences.
- Support teacher training for the expansion of the NC Farm Bureau's Ag in the Classroom curriculum for primary and elementary students.
- Work with funders, both public and private, to provide needed resources for 4-H and FFA programs.
- Promote agriculture as part of the STEM (Science, Technology, Engineering and Math) initiative in the public school system.
- Coordinate and promote summer high school and college internships with agricultural enterprises.

#### ***Timeline:***

Coordinated programming efforts will begin in the spring of 2018 and continue as planned throughout the year.

#### ***Responsible Parties:***

Pasquotank County Cooperative Extension, Elizabeth City-Currituck Public Schools, Local Family YMCA's, local and regional colleges and universities, Pasquotank County Farm Bureau, Pasquotank County farmers and agribusiness owners.

### ***Recommendation Six:***

#### **Develop Technical, Business and Marketing Training for the Maintenance and Expansion of Agriculture in Pasquotank County.**

Pasquotank County farmers expressed a need for training in numerous areas relating to changes, growth and opportunities in agriculture.

#### ***Action Steps:***

- Develop an information network of support agencies and people who can assist new and existing farmers with training and knowledge as they plan and begin new enterprises.
- Conduct training on business planning that will enhance farmer knowledge about forward pricing and hedging, identifying and managing risks, marketing and sales promotion, and organizing buyer/seller groups.
- Offer training experiences in timber management, development of a forestry management plan, and selecting consulting foresters.
- Facilitate grant writing training to help farmers apply and securing state and federal contracts for their products.
- Educate farmers on the new revenue opportunities for food product sales and agricultural services to the growing population centers near Pasquotank County.

#### ***Timeline:***

Programming efforts will begin in late 2018. Schedules for trainings, workshops and conferences will be developed by members of the implementation team.

#### ***Responsible parties:***

Pasquotank County Cooperative Extension, University of Mount Olive Lois G. Britt Agribusiness Center, NC Forest Service, NCDA&CS, USDA Natural Resources and Conservation District, and Pasquotank County Farm Bureau Board of Directors.

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[https://www.fws.gov/uploadedFiles/Region\\_5/NWRS/South\\_Zone/Great\\_Dismal\\_Swamp\\_Complex/Great\\_Dismal\\_Swamp/GDSNWRgeneral.pdf](https://www.fws.gov/uploadedFiles/Region_5/NWRS/South_Zone/Great_Dismal_Swamp_Complex/Great_Dismal_Swamp/GDSNWRgeneral.pdf)

<sup>24</sup> Zoning Ordinance of Pasquotank County, NC, 1993

<http://www.co.pasquotank.nc.us/Departments/planning/ORIGINAL%20Zoning%20Ordinance.pdf>

<sup>25</sup> United States Department of Agriculture, Soil Conservation Service, Soil Survey of Pasquotank County, North Carolina, 2007

[https://www.nrcs.usda.gov/Internet/FSE\\_MANUSCRIPTS/north\\_carolina/NC139/0/Pasquotank.pdf](https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/north_carolina/NC139/0/Pasquotank.pdf)

<sup>26</sup> Walden, Mike, Agriculture and Agribusiness in Pasquotank County, 2015

<https://ag-econ.ncsu.edu/wp-content/uploads/2015/11/Pasquotank.pdf>

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<sup>27</sup> 2016 North Carolina Agricultural Statistics, United States Department of Agriculture, National Agricultural Statistics Service and North Carolina Department of Agriculture and Consumer Services

<sup>28</sup> USDA Census of Agriculture, Pasquotank County Profile, 2002, 2007, 2012, [https://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_County\\_Level/North\\_Carolina/st37\\_2\\_001\\_001.pdf](https://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/North_Carolina/st37_2_001_001.pdf)

<sup>29</sup> Interview with NC State Extension Agent, Field Crops, Pasquotank County, 2107

<sup>30</sup> 2016 North Carolina Agricultural Statistics, United States Department of Agriculture, National Agricultural Statistics Service and North Carolina Department of Agriculture and Consumer Services

<sup>31</sup> 2016 North Carolina Agricultural Statistics, United States Department of Agriculture, National Agricultural Statistics Service and North Carolina Department of Agriculture and Consumer Services

<sup>32</sup> North Carolina Department of Agriculture and Consumer Services, NC Equine Study, 2009  
<http://www.ncagr.gov/markets/livestock/horse/documents/equinestudy050809.pdf>

<sup>33</sup> North Carolina State Extension, Currituck County Forestry Impacts, 2014, <https://content.ces.ncsu.edu/pasquotank-county>

<sup>34</sup> USDA Census of Agriculture, Pasquotank County Profile, 2002, 2007, 2012, [https://www.agcensus.usda.gov/Publications/2012/Online\\_Resources/County\\_Profiles/North\\_Carolina/cp37139.pdf](https://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/North_Carolina/cp37139.pdf)

<sup>35</sup> USDA Census of Agriculture, Pasquotank County Profile, 2002, 2007, 2012, [https://www.agcensus.usda.gov/Publications/2012/Online\\_Resources/County\\_Profiles/North\\_Carolina/cp37139.pdf](https://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/North_Carolina/cp37139.pdf)

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<sup>36</sup> Walden, Mike, Agriculture and Agribusiness in Pasquotank County, 2015  
<https://ag-econ.ncsu.edu/wp-content/uploads/2015/11/Pasquotank.pdf>

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## **Appendixes:**

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### ***Pasquotank County Voluntary Agricultural District Ordinance***

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*Pasquotank County Producer Survey*



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*Pasquotank County Non-farm Resident Survey*